AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions of claims in the application:

LISTING OF CLAIMS:

1. (CURRENTLY AMENDED) A magnetic head, comprising:
a seed layer structure comprising Al_2O_3, Ta, and NiFeCr seed layers;
an antiparallel (AP) pinned layer structure formed ~~above~~ directly on the NiFeCr seed layer; and
a free layer positioned above the AP pinned layer structure.

2. (ORIGINAL) A head as recited in claim 1, wherein the AP pinned layer structure includes at least two pinned layers having magnetic moments that are self-pinned antiparallel to each other, the pinned layers being separated by an AP coupling layer.

3. (CURRENTLY AMENDED) A head as recited in claim 2, wherein one of the AP pinned layers ~~are~~ is constructed of CoFe and another AP pinned layer is constructed of substantially pure Co.

4. (ORIGINAL) A head as recited in claim 3, wherein the pinned layer closest to the seed layer structure includes CoFe.

5. (CURRENTLY AMENDED) A head as recited in claim 2, wherein the AP pinned layers are ~~both~~ constructed of substantially pure Co.

6. (CURRENTLY AMENDED) A head as recited in claim 2, wherein the AP pinned layers are ~~both~~ constructed of CoFe.

7. (CURRENTLY AMENDED) A head as recited in claim 2, wherein the AP pinned layers are constructed of materials ~~selected to~~ that maximize a magnetostriction of the AP pinned layers.

8. (CURRENTLY AMENDED) A head as recited in claim 1, wherein a thickness of the NiFeCr seed layer is ~~selected to maximize~~ maximizes a GMR signal.

9. (ORIGINAL) A head as recited in claim 1, wherein the head has at least a 10% stronger GMR signal over a head having a substantially similar structure except for the seed layers.

10. (ORIGINAL) A head as recited in claim 1, wherein the head has at least a 10% stronger GMR signal over a head having a substantially similar structure except for materials used to form the pinned layers.

11. (ORIGINAL) A head as recited in claim 1, wherein the head forms part of a GMR head.

12. (ORIGINAL) A head as recited in claim 1, wherein the head forms part of a CIP GMR sensor.

13. (CURRENTLY AMENDED) A magnetic head, comprising:
a seed layer structure comprising Al_2O_3, Ta, and NiFeCr seed layers;
an antiparallel (AP) pinned layer structure formed above the NiFeCr seed layer,
wherein one of the AP pinned layers ~~are~~ is constructed of CoFe and another of the AP pinned layers is constructed of substantially pure Co, wherein the pinned layer closest to the seed layer structure includes CoFe; and

a free layer positioned above the AP pinned layer structure.

14. (ORIGINAL) A head as recited in claim 13, wherein the head has at least a 10% stronger GMR signal over a head having a substantially similar structure except for the seed layers.

15. (ORIGINAL) A head as recited in claim 13, wherein the head has at least a 10% stronger GMR signal over a head having a substantially similar structure except for materials used to form the pinned layers.

16. (ORIGINAL) A head as recited in claim 13, wherein the head forms part of a GMR head.

17. (CURRENTLY AMENDED) A magnetic head, comprising:
a seed layer structure comprising Al_2O_3, Ta, and NiFeCr seed layers;
an antiparallel (AP) pinned layer structure formed above the NiFeCr seed layer, wherein one of the AP pinned layers ~~are~~ is constructed of substantially pure Co and another of the AP pinned layers is constructed of substantially pure Co; and
a free layer positioned above the AP pinned layer structure.

18. (ORIGINAL) A head as recited in claim 18, wherein the head has at least a 10% higher positive magnetostriction over a head having a substantially similar structure except for the seed layers.

19. (ORIGINAL) A magnetic storage system, comprising:
magnetic media;
at least one head for reading from and writing to the magnetic media, each head having:

a sensor having the structure recited in claim 1;

a write element coupled to the sensor;

a slider for supporting the head; and

a control unit coupled to the head for controlling operation of the head.

20. (NEW) A magnetic storage system, comprising:

magnetic media;

at least one head for reading from and writing to the magnetic media, each head having:

a sensor having the structure recited in claim 13;

a write element coupled to the sensor;

a slider for supporting the head; and

a control unit coupled to the head for controlling operation of the head.